

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Office Action dated July 12, 2005. Reconsideration and allowance of the application in view of the remarks to follow are respectfully requested.

Claims 1, 3-11 are currently pending in the Application. Claims 1, 4, 7 and 11 are independent claims.

In the Office Action, Claims 1 and 3-10 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 3,761,894 to Pile ("Pile") in view of U.S. Patent No. 6,208,641 to Ruuskanen ("Ruuskanen"). Claim 11 is rejected under 35 U.S.C. § 103 as being obvious over Applicants Admitted Prior Art in view of Pile in view of Ruuskanen. This rejection is respectfully traversed.

In response to the above rejections, the following general remarks are presented as applicable for each of the rejections indicated above.

The Applicant respectfully submits that neither of the Pile and Ruuskanen references are not proper because both are from a non-analogous art area of telephony. To be considered analogous art, the references cited by the Examiner must be either in the same field as the invention or be reasonably pertinent to the

problem faced by the inventor.¹ Applicants respectfully submit that neither of these requirements are been met in the present case.

With regard to the first prong of the non-analogous art test, namely, whether a reference is within the field of the invention, the Federal Circuit has stated:

We have reminded ourselves and the PTO that it is necessary to consider "the reality of the circumstances" -in other words, common sense- in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.²

Thus, a case-by-case analysis must be made to determine if a person of ordinary skill would look to the fields of the references for a solution to the problem facing the inventor.³

In clarifying how to determine the second prong of the test, namely, whether a reference is reasonably pertinent to the

¹ See, e.g., *In re Clay*, 966 F.2d 656, 23 USPQ 2d 1058 (Fed. Cir. 1992); *In re Paulsen*, 30 F.3d 1475, 31 USPQ 2d 1671 (Fed. Cir. 1994); and *Wang Labs., Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ 2d 1767 (Fed. Cir. 1993).

² *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992).

³ *Id.* See also, *In re Wright*, 848 F.2d 1216, 6 USPQ 2d 1959, 1962 (Fed. Cir. 1988) ("[A]s with all section 103 decisions, judgement must be brought to bear based on the facts of each case.").

particular problem with which an inventor was involved, the Federal Circuit has stated that:

[a] reference is reasonably pertinent if ... it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem ... If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem ... [I]f it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.⁴

With regard to the first prong of the non-analogous art test and in view of the Federal Circuit's narrow view of what is in the same field of endeavor,⁵ it cannot be said that either of the Pile or Ruuskanen references are within the same field of endeavor as the present invention, which is directed to switching of video signals. Both the Pile and Ruuskanen references, which are directed to telephony applications, are not even remotely related to a video application. A person skilled in the art of video would never look for a video switching solution in the telephony art. The data rates and solutions that apply for telephony would never scale to the problems associated with video applications. Thus,

⁴ *In re Clay*, 23 USPQ 2d at 1060-1061.

⁵ In *Wang Laboratories*, 26 USPQ 2d 1767, in which the present invention related to memory circuits and the cited reference referred to compact modular memories, the Federal Circuit held that the cited references were not in the same field of endeavor, stating that the reference "... is not in the same field of endeavor as the claimed subject matter merely because it relates to memories."

Applicant respectfully submits that the Pile and Ruuskanen references are not in the same field of endeavor as the present invention and accordingly, can not be suitably applied.

With regard to the second prong of the non-analogous test, Applicant respectfully submits that the Pile and Ruuskanen references are not reasonably pertinent to the particular problem with which the inventor of the present invention was involved.

The present invention is directed to writing identical images of a parallel set of data from N inputs to K random access memories during a first time interval. This is a very different problem then faced by the inventors of the Pile and Ruuskanen references. In Pile and Ruuskanen, the problems faced by the inventors was in supporting serial data for a telephony application having much slower bit rates than those associated with parallel video data. Thus, Pile and Ruuskanen were not faced with the same problem as the inventor of the present invention. To paraphrase the words of the Federal Circuit, the matter with which the Pile and Ruuskanen references deal (relatively slow serial telephony data), logically would not have commended itself to the inventor's attention in considering their problem (relatively fast parallel video data). Thus, since it is directed to different purposes, the inventors would accordingly have had no motivation or occasion to consider it.

Accordingly, Applicant respectfully submits that the Pile and Ruuskanen references are not in the same field of endeavor as the present invention, nor is it reasonably pertinent to the particular problem with which the inventor of the present invention was involved.

Therefore, based on the above arguments and remarks, Appellant respectfully submits that the claims of the instant invention on appeal are not obvious over the combination of Pile and Ruuskanen. Consequently, the rejection of the claims based on the Pile and Ruuskanen references is in error.

Further, it is respectfully submitted that for the above rejections, the Office Action cites a motivation to make a combination of references that finds no support in the cited references.

With regard to the rejection of Claims 1 and 3-11 as being obvious from Pile in view of Ruuskanen, the Office Action states that (emphasis provided) "[i]t would have been obvious to a person having ordinary skill in the art at the time of the invention to have written identical images of the data into the RAM of Pile et al, light of the teachings of Ruuskanen et al, in order to produce a more compact and power efficient circuit." Yet this does not result from the combination of Pile and Ruuskanen as suggested because the additional of the multiple RAMS of Ruuskanen to each single RAM of Pile merely increases complexity and since in both,

the data is written into successive RAMS in a serial order, does not provide the benefits arrived at by the present invention (as discussed further below).

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1442, 1444 (Fed. Cir. 1992). See also **In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art of knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

When determining obviousness, "[t]he factual inquiry whether to combine references must be thorough and searching." **In re Lee**, 277 F.3d 1338, 1343, 61 USPQ 1430, 1433 (Fed. Cir. 2002), citing **McGinley v. Franklin Sports, Inc.**, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). "It must be based on objective evidence of record." *Id.* "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" **In re Dembiczak**, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617. "Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact." **Dembiczak**, 175 F.3d at 1000, 50 USPQ2d at 1617, citing **McElmurry v.**

Ark. Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

The suggestion in the Office Action that the combinations of prior art references "would be obvious to one having ordinary skill in the art ... " is respectfully refuted. One may not utilize the teachings of the present application as a road map to pick and choose amongst prior art references for the purposes of attempting to arrive at the presently disclosed invention. The Federal Circuit has identified three possible sources for motivation to combine references including the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. (See, *In re Rouffet*, U. S. Court of Appeals Federal Circuit, U.S.P.Q. 2d, 1453, 1458.) There must be a specific principle that would motivate a skilled artisan, with no knowledge of the present invention, to combine the prior art as suggested in the Office Action. The use of hindsight in the selection of references is forbidden in comprising the case of obviousness. Lacking a motivation to combine references, a proper case of obviousness is not shown (see, *In re Rouffet*, 1458).

The U.S. Court of Appeals for the Federal Circuit (the "Federal Circuit") restated the legal test applicable to rejections under 35 U.S.C. § 103(a) in the *In re Rouffet*, holding. The Court stated:

[V]irtually all [inventions] are combinations of old elements. Therefore an Examiner may often find every element of a claimed invention in the prior art. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an Examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." To prevent the use of hind sight based on the invention to defeat patentability of the invention, this court requires the Examiner to show a motivation to combine the references that create the case of obviousness. The Board [of Appeals] did not, however, explain what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination. ... To counter this potential weakness in the obviousness construct **the suggestion to combine requirements stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.**

In re Rouffet, 47 USPQ2d 1457-58 (Fed. Cir., July 15, 1998)

(citations omitted, emphasis added).

More recently, the Federal Circuit again dealt with what is required to show a motivation to combine references under 35 U.S.C. § 103(a). In this case the court reversed the decision of the Board of appeals stating:

[R]ather than pointing to specific information in Holiday or Shapiro that suggest the combination..., the Board instead described in detail the similarities between the Holiday and Shapiro references and the claimed invention, noting that one reference or the other-in combination with each other... described all of the limitations of the pending claims. Nowhere does the Board particularly identify any suggestion, teaching, or motivation to combine the ... references, nor does the Board make specific-or even inferential-findings concerning the identification of

the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any factual findings that might serve to support a proper obviousness analysis.

In re Dembiczak, 50 USPQ2d 1614, 1618 (Fed. Cir., April 28, 1999) (citations omitted).

Thus, from both *In re Rouffet* and *In re Dembiczak* it is clear that the Federal Circuit requires a specific identification of a suggestion, motivation, or teaching why one of ordinary skill in the art would have been motivated to select the references and combine them.

The Examiner's reasoning for the motivation, namely, that those skilled in the art would have been motivated to combine Ruuskanen with Pile, could only have been made with hindsight based on the teachings of the present disclosure. The Examiner's reasoning for the motivation for combining the references is counter to what is suggested in the Office Action since the combination would merely lead to an increase in complexity and power consumption.

Where a feature is not shown or suggested in the prior art references themselves, the Federal Circuit has held that the skill in the art will rarely suffice to show the missing feature. Al-Site Corp. v. VSI International Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (Rarely, however, will the skill in the art

component operate to supply missing knowledge or prior art to reach an obviousness judgment).

Thus, Applicants again respectfully submit that the Examiner has used impermissible hindsight to reject Claims 1, and 3-11 under 35 U.S.C. § 103(a). As discussed above, the Federal Circuit in *In re Rouffet* stated that virtually all inventions are combinations of old elements. Therefore an Examiner may often find every element of a claimed invention in the prior art. To prevent the use of hindsight based on the invention to defeat patentability of the invention, the Examiner is required to show a motivation to combine the references that create the case of obviousness. Applicants respectfully submit that the Examiner has not met this burden.

The mere fact that the prior art device could be modified so as to produce the claimed device, which in this case even in combination it does not (as discussed further below), is not a basis for an obviousness rejection unless the prior art suggested the desirability of the modification. See, *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984); and *In re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989).

How can the Office Action espouse that this reconstruction forwarded does not include knowledge gleamed only from the applicant's disclosure? If this reconstruction did not come from the present application, where did it come from? The above reconstruction certainly did not come from the prior art since the

benefit described in Ruuskanen is defeated by a combination with Pile.

In consideration of the use of improper hindsight for rendering a claim obvious in light of prior art, the Federal Circuit has stated that "to draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction - an illogical and inappropriate process by which to determine patentability." (Sensonic, Inc. v. Aerosonic Corp., 81 F.3d 1566, 38 USPQ2d 1551 (Fed. Cir. 1996). "To imbue one of ordinary skill in the art with knowledge of the invention ensued, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." (In re Zurko, 111 F.3d 887, 42 USPQ2d 1476 (Fed. Cir. 1997). "A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field (cited reference omitted). Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only

the invention taught is used against its teacher (cited references omitted).'" (In re Kotzab, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000)).

Applicant would like to bring to the Examiner's attention well established case law that clearly shows that the court frowns on such use of hindsight, examples of such cases being as follows:

It is stated in In re Sernaker, 217 U.S.P.Q. 1, 6 (C.A.F.C. 1983): "prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings."

It is clear that the suggestion to combine references should not come from Applicant, as was forcefully stated in Orthopedic Equipment Co. v United States, 217 U.S.P.Q. 193, 199 (C.A.F.C. 1983): "It is wrong to use the patent in suit [here the application] as a guide through the maze of prior art references, combining the right references in the right way to achieve the result of the claims in suit [here the claims pending]. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness in a court of law [here the PTO]."

Also, the case law is clear in guarding against the use of hindsight in reading Applicants invention into the prior art, which art is clearly not disclosing the Applicants invention as claimed.

Applicants would like to bring the following cases to the Examiner's attention:

The Supreme Court in *Calmar, Inc. v. Cook Chemical Co.*, 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966), in which the Court warns the dangers of "slipping into hindsight", citing the case of *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 141 U.S.P.Q. 549 (6th Cir., 1964), where the doctrine is stated (emphasis provided):

We now come to the patented device which after all is the subject matter of this case. At the outset we take note of two well-established principles. The first is that in considering the questions of obviousness, we must view the prior art from the point in time prior to when the patented device was made. Many things may seem obvious after they have been made and for this reason courts should guard against slipping into use of hindsight. We must be careful to "view the prior art without reading into that art the teachings of appellant's invention." Application of *Sporck*, 301 F.2d 686, 689 (C.C.P.A.).

The courts have long held that there must be some teaching in the references cited to suggest the combination of the references in a manner to obtain the combination of elements of the rejected claim(s). It is well known that in order for any prior art references themselves to be validly combined for use in a prior-art § 103 rejection, the references themselves, or some other prior art, must suggest that they be combined. For example:

The Board has stated in *Ex parte Levengood*, 28 USPQ 2d 1300 (PTOBA&I 1993):

In order to establish prima facie case of obviousness, it is necessary for the examiner to present evidence, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. ... That which is within the capabilities of one skilled in the art is not synonymous with obviousness ... That one can reconstruct and/or explain the theoretical mechanism of an invention by means of logic and sound scientific reasoning does not afford the basis for an obviousness conclusion unless that logic and reasoning also supplies sufficient impetus to have led one of ordinary skill in the art to combine the teachings of the references to make the claimed invention ... Our reviewing courts have often advised the Patent and Trademark Office that it can satisfy the burden establishing a prima facie case of obviousness only by showing some objective teaching in either the prior art, or knowledge generally available to one of ordinary skill in the art, that 'would lead' that individual 'to combine the relevant teachings of the references which describe various aspects of a patent applicant's invention without also providing evidence of a motivating force which would impel one skilled in the art to do what the patent applicant has done.

As was further stated in *Uniroyal, Inc. v Rudkin-Wiley Corp.*, 5 U.S.P.Q.2d 1434 (C.A.F.C. 1988), "where prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than hindsight gleaned from the invention itself Something in the prior art must suggest the desirability and thus the obviousness of making the combination."

The applicants respectfully maintain that there is no suggestions in the prior art references to make the combinations in the manner proposed by the Examiner to achieve the applicants' claimed invention.

The Examiner is requested to consider MPEP 2143, wherein it is stated:

THE PRIOR ART MUST SUGGEST THE DESIRABILITY OF THE CLAIMED INVENTION ... The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." And, "FACT THAT REFERENCES CAN BE COMBINED OR MODIFIED IS NOT SUFFICIENT TO ESTABLISH PRIMA FACIE OBVIOUSNESS ... The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)... Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.).

It is respectfully submitted that in light of the state of the law as set forth by the Federal Circuit, that Pile in view of Ruuskanen as utilized to reject each of Claims 1, and 3-11 finds proper motivation for combination. Further, since the Office Action acknowledges that the prior art alone does not show the claimed features, it is respectfully requested that Claims 1, and 3-11 be allowed and an indication to that effect is respectfully requested.

Further, it is respectfully submitted that even in combination Pile in view of Ruuskanen does not disclose or suggest the inventive features of Claims 1, 3-11.

Pile teaches writing individual bits of a data word are written to successive memories (see, abstract). Ruuskanen teaches writing bits in a serial fashion to a plurality of memories (see, Title, "Switch With One-Bit Resolution and description in Col. 2, lines 16-29). Accordingly, and for all of the above reasons, it is respectfully submitted that Pile in view of Ruuskanen does not disclose or suggest (emphasis provided) "[a] signal router, comprising: a conditioning circuit configured to write K identical images of a first parallel set of data from N inputs to K random access memories during a first time interval; K respective bit selectors each configured to read respective portions of a respective one of said K identical images; said K respective bit selectors being coupled to construct M output data streams during a second time interval wherein each of the random access memories comprises exactly two parts configured so that during the second time interval a read occurs from a first one of the parts, while a write occurs to a second one of the parts" as required by Claim 1; nor "[a] signal router, comprising: a controller programmed to store identical images of parallel data from N inputs in K memories; said controller being further programmed to read respective bits of said data from each of said K memories to

produce M respective output data streams, whereby N inputs are mapped to M outputs, wherein each of the K memories comprises exactly two parts configured so that during the second time interval a read occurs from a first one of the parts, while a write occurs to a second one of the parts" as required by Claim 4; nor "[a] method of routing data from N inputs to M outputs, comprising the steps of: applying parallel data from said N inputs to a data buss by means of at least one of time and space multiplexing; imaging said parallel data on K random access memories from said buss; reading respective sets of bits from said random access memories to form respective ones of said signals ultimately demultiplexed to form said M outputs, wherein each of the random access memories comprises exactly two parts configured so that during the second time interval a read occurs from a first one of the parts, while a write occurs to a second one of the parts" as required by Claim 7; nor "[a] signal router, comprising: N inputs for receiving synchronous streams of serial broadcast data; a conditioning circuit configured to write K identical images of a first set of parallel data from the N inputs to K memories during a first time interval; K respective bit selectors each configured to read respective portions of a respective one of said K identical images; and each of said K respective bit selectors being coupled to construct M output data streams during a second time interval" as required by Claim 11.

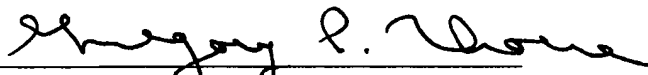
Based on the foregoing, the Applicants respectfully submit that independent Claims 1, 4, 7 and 11 are patentable over Pile in view of Ruuskanen and notice to this effect is earnestly solicited. Claims 3, 6, and 8-10 respectively depend from one of Claims 1, 4, and 7 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of said claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Early and favorable action is earnestly solicited.

Respectfully submitted,

By 
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October 12, 2005

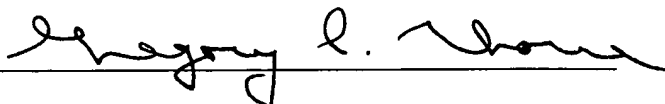
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